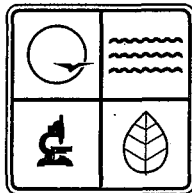


STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES
MISSOURI AIR CONSERVATION COMMISSION



PERMIT BOOK

PERMIT TO CONSTRUCT

Under the authority of RSMo 643 and the Federal Clean Air Act the applicant is authorized to construct the air contaminant source(s) described below, in accordance with the laws, rules and conditions as set forth herein.

Permit Number: **042006-012**

Project Number: 2005-12-025

Owner: Ford Motor Company

Owner's Address: The American Road, Dearborn, MI 48126

Installation Name: Ford Motor Company - Kansas City Assembly Plant

Installation Address: 8121 U.S. NE Highway 69, Claycomo, MO 64119

Location Information: Clay County, S27, T51N, R32W

Application for Authority to Construct was made for:

Construction of a fluidized bed skid cleaner. This review was conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

☐ Standard Conditions (on reverse) are applicable to this permit.

☒ Standard Conditions (on reverse) and Special Conditions (listed as attachments starting on page 2) are applicable to this permit.

APR 26 2006

EFFECTIVE DATE

Steven J. Fuler

DIRECTOR OR DESIGNEE
DEPARTMENT OF NATURAL RESOURCES

for JLR

STANDARD CONDITIONS:

Permission to construct may be revoked if you fail to begin construction or modification within two years from the effective date of this permit. Permittee should notify the Air Pollution Control Program if construction or modification is not started within two years after the effective date of this permit, or if construction or modification is suspended for one year or more.

You will be in violation of 10 CSR 10-6.060 if you fail to adhere to the specifications and conditions listed in your application, this permit and the project review. Specifically, all air contaminant control devices shall be operated and maintained as specified in the application, associated plans and specifications.

You must notify the Air Pollution Control Program of the anticipated date of start up of this (these) air contaminant source(s). The information must be made available not more than 60 days but at least 30 days in advance of this date. Also, you must notify the Department of Natural Resources Regional Office responsible for the area within which you are located within 15 days after the actual start up of this (these) air contaminant source(s).

A copy of this permit and permit review shall be kept at the installation address and shall be made available to Department of Natural Resources' personnel upon request.

You may appeal this permit or any of the listed Special Conditions as provided in RSMo 643.075. If you choose to appeal, the Air Pollution Control Program must receive your written declaration within 30 days of receipt of this permit.

If you choose not to appeal, this certificate, the project review, your application and associated correspondence constitutes your permit to construct. The permit allows you to construct and operate your air contaminant source(s), but in no way relieves you of your obligation to comply with all applicable provisions of the Missouri Air Conservation Law, regulations of the Missouri Department of Natural Resources and other applicable federal, state and local laws and ordinances.

The Department of Natural Resources has established the Outreach and Assistance Center to help in completing future applications or fielding complaints about the permitting process. You are invited to contact them at 1-800-361-4827 or (573) 526-6627, or in writing addressed to Outreach and Assistance Center, P.O. Box 176, Jefferson City, MO 65102-0176.

The Air Pollution Control Program invites your questions regarding this air pollution permit. Please contact the Construction Permit Unit at (573) 751-4817. If you prefer to write, please address your correspondence to the Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102-0176, attention Construction Permit Unit.

2005-12-025

Ford Motor Company

The American Road, Dearborn, MI 48126

Ford Motor Company - Kansas City Assembly Plant

8121 U.S. NE Highway 69, Claycomo, MO 64119

Clay County, S27, T51N, R32W

Construction of a fluidized bed skid cleaner. This review was conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

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Permit No.	
Project No.	2005-12-025

SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

The special conditions listed in this permit were included based on the authority granted the Missouri Air Pollution Control Program by the Missouri Air Conservation Law (specifically 643.075) and by the Missouri Rules listed in Title 10, Division 10 of the Code of State Regulations (specifically 10 CSR 10-6.060). For specific details regarding conditions, see 10 CSR 10-6.060 paragraph (12)(A)10. "Conditions required by permitting authority."

Ford Motor Company - Kansas City Assembly Plant
Clay County, S27, T51N, R32W

1. Ford Motor Company - Kansas City Assembly Plant shall use the fluidized bed skid cleaner (EP49) exclusively to remove non-chlorinated/non-hazardous coatings from metal parts.
2. Natural gas or propane shall be the only fuels burned in the fluidized bed skid cleaner (EP49).
3. Ford Motor Company - Kansas City Assembly Plant shall use an afterburner to control emissions from the fluidized bed skid cleaner. The afterburner shall operate between 1,400 and 1,650 degrees Fahrenheit.
4. The fluidized bed skid cleaner (EP49) shall be equipped with an electronic controller, with digital readout, which is able to monitor and display the temperature in the afterburner to an accuracy of plus or minus two percent (2%).
5. The fluidized bed skid cleaner (EP49) shall have opacity of less than ten percent (10%) at all times.

Project Number: 2005-12-025
Installation ID Number: 047-0019
Permit Number:

Complete: December 13, 2005
Reviewed: January 9, 2006

Clay County, S27, T51N, R32W

- Ford Motor Company - Kansas City Assembly Plant has applied for authority to construct a fluidized bed skid cleaner.
- Hazardous Air Pollutant (HAP) emissions are expected from the proposed equipment due to the combustion of fuel, but in insignificant amounts.
- None of the New Source Performance Standards (NSPS) apply to the proposed equipment.
- None of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) or currently promulgated Maximum Achievable Control Technology (MACT) regulations apply to the proposed equipment.
- An afterburner and cyclone is being used to control emissions from the equipment in this permit.
- This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. The proposed fluidized bed skid cleaner is classified as an incinerator. All incinerators are required to obtain a permit from the Air Pollution Control Program as mandated in 10 CSR 10-6.060. Potential emissions are less than de minimis levels.
- This installation is located in Clay County, an attainment area for all criteria air pollutants.
- This installation is not on the List of Named Installations [10 CSR 10-6.020(3)(B), Table 2].

- Ambient air quality modeling was not performed since potential emissions of the application are below de minimis levels.
- Emissions testing is not required for the fluidized bed skid cleaner.
- Revision to your Part 70 Operating Permit application is required for this installation within one (1) year of the new equipment startup.
- Approval of this permit is recommended with special conditions.

INSTALLATION DESCRIPTION

Ford Motor Company - Kansas City Assembly Plant assembles passenger cars and trucks. The existing installation is considered a major source under construction permits and is a Part 70 source under operating permits.

The following new source review permits have been issued to Ford Motor Company - Kansas City Assembly Plant from the Air Pollution Control Program.

Permit Number	Description
0779-014	Spray booth modifications
1084-003	Paint shop modifications
0386-003	Truck E-coat modifications
0187-005	Eight paint repair booths
1187-002	Sealer oven
1089-001	Replacement paint shop
0990-009	New guidecoat system
0590-001	Protective transit coating application equipment
0690-016	Commercial sealer bake oven replacement
0692-016	Dual pass PVC enclosure and IR gel oven
0293-003	Replacement of blackout booth (water base) with an air house
1193-015	Automation of passenger car underbody sealer application
0594-034	Modification of the tutone/repair system into a main enamel spraybooth and oven system and designation as main enamel No. 2
0694-020	Installation of adhesive application station
0293-003A	Modification to compliance reporting for blackout booth
112000-014	Installation of six (6) low-NO _x , direct-fired, natural gas space heaters with individual heat input capacities of 20 million british thermal units per hour.
082001-022	Installation of two (2) worker stations for application of glass cleaner and glass primer to vehicle quarter glass, which is subsequently installed onto a vehicle with adhesive by robot.
082001-022A	Amended the wording of the special conditions to apply only to the two worker stations instead of the whole installation.
112000-014A	Installation of seven (7) 20 MMBtu/hr space heaters rather than six (6) space heaters.

PROJECT DESCRIPTION

Ford Motor Company - Kansas City Assembly Plant has applied for authority to construct a fluidized bed skid cleaner. The purpose of the skid cleaner is to remove the buildup of paints on the skids that are used to carry automobile parts that are being painted. In the skid cleaner, a tank or vat is filled with quartz sand that is fluidized by primary air blown into the bed at the bottom via an air distribution system. Natural gas (or propane) is mixed into that air and, as the mixture emerges from the sand, it is ignited by a pilot burner. The low speed of the air through the sand mass causes a flame to spread over the complete surface of the fluidized bed. The contact of the flame with the fluidized sand provides heat transfer. This action causes the fluidized sand to heat up to a controlled homogenous temperature between 600° to 1000° F. The phenomenon of fluidization makes it possible to totally immerse the parts to be cleaned in the hot quartz sand, where gasification of the organic impurities on the parts occurs. The released gases come out of the fluidized bed and are combusted in the integral afterburner (also referred to as the secondary post combustion chamber). Additional or “secondary” air is injected tangentially into the afterburner ensuring better combustion of the released gases and the natural gas-air mixture. The temperature in the afterburner ranges between 1400° and 1650° F. The combusted gases are exhausted through a cyclone for particulate collection before going through a fan and out the stack.

The peak gas consumption of the fluidized bed is 6.603 million British Thermal Units (mmBTU) per hour.

EMISSIONS/CONTROLS EVALUATION

The potential emissions of the fluidized bed skid cleaner were obtained from the manufacturer's data provided by the applicant. An afterburner and cyclone are being used to control emissions from the fluidized bed skid cleaner. The afterburner is assumed to have a minimum of 95% destruction efficiency. Potential emissions of the application represent the potential of the new equipment, assuming continuous operation (8760 hours per year). Existing potential emissions were taken from Permit Number 082001-022. Existing actual emissions were taken from the installation's 2004 Emission Inventory Questionnaire (EIQ). The following table provides an emissions summary for this project.

Table 1: Emissions Summary (tons per year)

Pollutant	Regulatory <i>De Minimis</i> Levels	Existing Potential Emissions	Existing Actual Emissions (2004 EIQ)	Potential Emissions of the Application	New Installation Conditioned Potential
PM ₁₀	15.0	N/D	69.40	8.67	N/A
SO _x	40.0	Major	57.45	N/D	N/A
NO _x	40.0	Major	88.42	19.27	N/A
VOC	40.0	Major	1904.36	2.19	N/A
CO	100.0	N/D	71.22	5.78	N/A
HAPs	10.0/25.0	N/D	N/D	N/A	N/A

N/A = Not Applicable; N/D = Not Determined

PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of criteria pollutants and HAPs are below de minimis levels.

APPLICABLE REQUIREMENTS

Ford Motor Company - Kansas City Assembly Plant shall comply with the following applicable requirements. The Missouri Air Conservation Laws and Regulations should be consulted for specific record keeping, monitoring, and reporting requirements. Compliance with these emission standards, based on information submitted in the application, has been verified at the time this application was approved. For a complete list of applicable requirements for your installation, please consult your operating permit.

GENERAL REQUIREMENTS

- *Submission of Emission Data, Emission Fees and Process Information*, 10 CSR 10-6.110
The emission fee is the amount established by the Missouri Air Conservation Commission annually under Missouri Air Law 643.079(1). Submission of an Emissions Inventory Questionnaire (EIQ) is required April 1 for the previous year's emissions.
- *Operating Permits*, 10 CSR 10-6.065
- *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin*, 10 CSR 10-6.170
- *Restriction of Emission of Visible Air Contaminants*, 10 CSR 10-6.220
- *Restriction of Emission of Odors*, 10 CSR 10-3.090

SPECIFIC REQUIREMENTS

- *Restriction of Emission of Particulate Matter From Industrial Processes*, 10 CSR 10-6.400

STAFF RECOMMENDATION

On the basis of this review conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*, I recommend this permit be granted with special conditions.

Susan Heckenkamp
Environmental Engineer

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated December 9, 2005, received December 13, 2005, designating Ford Motor Company - Kansas City Assembly Plant as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.
- Kansas City Regional Office Site Survey, dated December 19, 2005.

Mr. Robert Streight
Environmental Specialist
6200 Mercury Drive, FN2-GP025
Dearborn, MI 48126

RE: New Source Review Permit - Project Number: 2005-12-025

Dear Mr. Streight:

Enclosed with this letter is your permit to construct. Please study it carefully. Also, note the special conditions, if any, on the accompanying pages. The document entitled, "Review of Application for Authority to Construct," is part of the permit and should be kept with this permit in your files.

Operation in accordance with these conditions, your new source review permit application and with your amended operating permit is necessary for continued compliance.

The reverse side of your permit certificate has important information concerning standard permit conditions and your rights and obligations under the laws and regulations of the State of Missouri.

If you have any questions regarding this permit, please do not hesitate to contact me at (573) 751-4817, or you may write to me at the Department of Natural Resources, Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102. Thank you for your attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Kendall B. Hale
New Source Review Unit Chief

KBH:shl

Enclosures

c: Kansas City Regional Office
PAMS File 2005-12-025
Permit Number: